CLAIMS

1- 11. (cancelled)

12. (original) Software stored in or on a computer-readable medium for causing a software-controlled processing device coupled to first and second magnetic bearing supporting a rotor to control positioning of the rotor in the bearings, the rotor having a longitudinal axis and the magnetic bearings defining a principal axis therebetween, each of the bearings having at least four magnetic poles with respective magnet coils associated therewith, the voltage and/or current flow through the magnet coils generating force vectors to support the rotor for rotation relative to the bearings, the force vectors under the control of the processor to selectively position the longitudinal axis relative to the principal axis, the software causing the processor to perform the function of:

controlling the force vectors to align the rotor in its bearings so that the longitudinal axis thereof and the principal axis defined between the bearings are not axially coincident with one another.

13. (original) The software of claim 12, wherein the longitudinal axis is off-set from the principal axis.

14. (original) The software of claim 12, wherein the longitudinal axis is aligned non-parallel to the principal axis.

15. (original) The software of claim 12, wherein the longitudinal axis is aligned non-parallel to the principal axis and defines a pivot point intermediate the ends of the rotor.

16. (original) The software of claim 14, wherein the position of the pivot point along the longitudinal axis is determined as a function of the ratio of the force vectors applied by the first bearing and the second bearing.

17. (original) The software of claim 16, wherein the processor means provides a selected waveform to be impressed on the magnetic field of the magnetic bearings to excite the rotor in response to the waveform.

18. (original) The software of claim 16, wherein the processor means generates the selected waveform in response to execution of a set of instructions in a recurring manner.

19. (original) The software of claim 16, wherein the waveform is impressed on the rotor at a selected angle relative to a fixed reference coordinate system and remains stationary in that coordinate system during periods of time when the rotor is in motion.

20. (original) The software of claim 16, wherein the waveform is impressed on the

rotor at a selected angle relative to a fixed reference coordinate and rotates

with the rotor when the rotor is in motion.

21. (original) The software of claim 20, wherein the waveform perturbation rotates in

synchronism with the rotor when the rotor is in motion.

22. (original) The software of claim 16, wherein the waveform is selected from the

group comprising sine waveform, sine squared waveform, cosine waveform,

cosine squared waveform, random waveform, square waveform, squared pulse

waveform, triangular waveform, single square waveform, single triangular

waveform, sawtooth waveform.

23—28 (cancelled)